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Household waste behaviours among a community sample in Iran: An application of the theory of planned behaviour

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ABSTRACT

Understanding the factors influencing recycling behaviour can lead to better and more effective recycling programs in a community. The goal of this study was to examine factors associated with household waste behaviours in the context of the theory of planned behaviour (TPB) among a community sample of Iranians that included data collection at time 1 and at follow-up one year later at time 2. Study participants were sampled from households under the coverage of eight urban health centers in the city of Qazvin. Of 2000 invited households, 1782 agreed to participate in the study. A self-reported questionnaire was used for assessing socio-demographic factors and the TPB constructs (i.e. attitude, subjective norms, perceived behavioural control, and intention). Furthermore, questions regarding moral obligation, self-identity, action planning, and past recycling behaviour were asked, creating an extended TPB. At time 2, participants were asked to complete a follow-up questionnaire on self-reported recycling behaviours. All TPB constructs had positive and significant correlations with each other. Recycling behaviour at time 1 (past behaviour) significantly related to household waste behaviour at time 2. The extended TPB explained 47% of the variance in household waste behaviour at time 2. Attitude, perceived behavioural control, intention, moral obligation, self-identity, action planning, and past recycling behaviour were significant predictors of household waste behaviour at time 2 in all models. The fact that the expanded TPB constructs significantly predicted household waste behaviours holds great promise for developing effective public campaigns and behaviour-changing interventions in a region where overall rates of household waste reduction behaviours are low. Our results indicate that educational materials which target moral obligation and action planning may be particularly effective.

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1. Introduction

The increasing production of household waste is one of the effects of population growth, rising living standards, rapid development and urbanisation (Mahar et al., 2007). Household waste is generally defined as waste that is produced by normal household activities (Mbande, 2003). Household waste is one of the major sources of municipal solid waste to which most costs of municipal waste management are allocated (Karak et al., 2012). Globally, the waste management sector is faced with numerous challenges including the increasing amount and complexity of waste (Webster, 2012). This problem leads to a multitude of environmental hazards such as infectious diseases, environmental degradation, water and soil pollution, greenhouse gas emission and negative impacts on the quality of human life (Miller, 2000). These problems are more common and visible in developing countries, where garbage collection operations do not occur at all or not enough. One solution for overcoming problems associated with overloaded landfills is recycling (Ehrampoush and Baghianimoghadam, 2005). Recycling is a process whereby materials that have been used previously are collected, processed, re-built and re-used (Rudnick, 2008). Despite the fact that more than half of all solid waste is recyclable, studies indicate that a considerable amount of recyclable waste is dumped into the garbage (Mancini et al., 2007).

In the developing country of Iran, much attention has been given to the environmental effects of municipal waste over the last several years (Abduli et al., 2007). Studies show that a relatively high volume of waste is generated in most provinces and cities of Iran (Nasrabadi et al., 2008). For example, 320 kg of solid waste is generated annually by each citizen in Tehran city. In other

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